

Amendments to the Claims:

1- 5. (Cancelled)

6. (Currently Amended) The composite fabric of Claim 25, wherein the ionizing radiation attenuant ~~filler~~ comprises barium, barium sulfate or barium salts.

7. (Currently Amended) The composite fabric of Claim 6, wherein the ~~attenuant filled~~ polymer matrix is selected from the group consisting of polyolefins, polyethylene, polypropylene, thermal polyolefins, thermal polyolefin elastomer, vinyl polymers, polyvinyl acetate, vinyl acetate copolymers, acrylic polymers, polymethylmethacrylate, thermoset polymers, silicones, urethane polymers, elastomeric compounds, styrene-butadiene rubber, styrene-isoprene rubber, polybutadiene, polyisoprene, butyl rubber, epoxy polymers, polyvinyl alcohol, natural latex, ethylene vinyl acetate, polyester, and blends thereof.

8. (Currently Amended) The composite fabric of Claim ~~[[1]]~~ 25, wherein the permeation efficiency of the composite is greater than 50% when exposed to the chemicals included on ASTM F1001.

9. (Original) The composite fabric of Claim 8, wherein the permeation efficiency is greater than 75% when exposed to the chemicals included on ASTM F1001.

10. (Original) The composite fabric of Claim 8, wherein the permeation efficiency is 100% when exposed to the chemicals included on ASTM F1001.

11. (Currently Amended) The composite fabric of Claim ~~[[1]]~~ 25, wherein at least one of the exterior surfaces of the composite fabric is heat-sealable.

12 – 16 (Cancelled)

17. (Previously Presented) A chemically resistant radiation attenuation composite barrier fabric comprising at least one chemical barrier layer, at least one ionizing radiation attenuation layer, and an additional reinforcing layer of a woven, knitted or nonwoven construction adhered to said at least one chemical barrier layer or to said at least one radiation attenuation layer by solvent or aqueous based adhesive lamination, thermal lamination, extrusion lamination, powder bond adhesive lamination, ultrasonic lamination, flame lamination, calendering, or pressure sensitive adhesive lamination, and an organophosphate hydrolase enzyme and/or oxidizing polymer thus rendering the composite reactive to phosphorous-based and oxidizable chemicals such as military chemical warfare agents, wherein the composite fabric has at least 8 hours resistance to the military chemical agents distilled mustard (HD), Sarin (GB), Soman (GD), Lewisite (L), and Nerve Agent (Vx), and the composite further passes ASTM F1671.

18. (Original) The composite fabric of Claim 6, wherein the polymer matrix is flame resistant or retardant.

19 - 24. (Cancelled)

25. (Previously Presented) A chemically resistant radiation attenuation composite barrier fabric comprising a first ply having ionizing radiation attenuation properties and comprising a mixture of a polymer matrix and an ionizing radiation attenuant, a second ply having chemical barrier properties and comprising a sheet material including at least two polymer layers of different composition, and additionally including an electromagnetic field shielding ply.

26. (Previously Presented) The composite fabric according to Claim 25 wherein the electromagnetic field shielding ply is selected from the group consisting of metallized films and metallized fabrics.

27. (Previously Presented) A chemically resistant radiation attenuation composite barrier fabric comprising an ionizing radiation attenuation layer comprising a spunbond polypropylene supporting substrate, a film formed of a thermoplastic polyolefin matrix containing 40-80% by weight barium sulfate covering one surface of the spunbond polypropylene supporting substrate, and a knit fabric layer adhered to said film, and a chemical barrier layer adhered to a surface of the spunbond polypropylene supporting substrate, said chemical barrier layer comprising a coextruded barrier film having polyolefin outer layers and a polyvinylidene chloride interior layer.

28. (Original) The composite fabric of Claim 27 wherein said film has a thickness of .5 mil to 30 mil, and said spunbond polypropylene supporting substrate has a basis weight of 0.25 to 4.0 ounce per square yard.

29. (Original) The composite fabric of Claim 27 wherein said knit fabric is a knitted polyester fabric and is adhered to said film by a solvent-based polyurethane adhesive.

30. (Original) The composite fabric of Claim 27 wherein said chemical barrier layer is thermally laminated to the spunbond surface of said radiation attenuation layer.

31. (Original) A protective garment comprising the composite fabric of Claim 27.

32. (Original) The protective garment of Claim 31 which includes seams, and a seam tape covering the seams, and wherein the seam tape is formed from a chemically resistant radiation attenuation composite barrier fabric, comprising a first ply having radiation attenuation properties and comprising a mixture of a polymer matrix and a radiation attenuant, and a second ply having chemical barrier properties.

33. (Original) An article of manufacture fabricated from the composite fabric of Claim 27 in the form of a protective shelter, patient wrap, or human remains bag.

34 - 40. (Cancelled)